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IMPROVING POULTRY

THROUGH THE
NATIONAL POULTRY IMPROVEMENT PLAN

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Department of Agriculture



This Emblem Identifies
**BREEDING STOCK
HATCHING EGGS
BABY CHICKS**

PRODUCED UNDER OFFICIAL SUPERVISION IN A CONSTRUCTIVE
BREEDING *and* PULLORUM DISEASE CONTROL PROGRAM

FOR FURTHER INFORMATION CONSULT YOUR COUNTY AGRICULTURAL AGENT
VOCATIONAL AGRICULTURAL TEACHER, STATE DEPARTMENT OF AGRICULTURE
OR

U.S. DEPARTMENT OF AGRICULTURE

The complete provisions for the operation of the National Poultry Improvement Plan are contained in Miscellaneous Publication 300, The National Poultry Improvement Plan, which may be obtained upon request from county agricultural agents or the United States Department of Agriculture. The name of the contact representative, the official State agency, and the breeding stages and pullorum-control classes being undertaken in each of the cooperating States are contained in a mimeograph, A. H. D. No. 25, State Participation in the National Poultry Improvement Plan. A guide for the development of State turkey improvement work, A. H. D. No. 22, Tentative Turkey Improvement Plan, is also available from the United States Department of Agriculture.

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IMPROVING POULTRY THROUGH THE NATIONAL POULTRY IMPROVE- MENT PLAN

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NEED FOR THE NATIONAL PLAN

Progressive poultrymen have long recognized the need for organized poultry-improvement programs on breeding and pullorum-disease control. Many of the States have been conducting such programs successfully for a number of years. Because of a lack of coordination among programs and the use of conflicting terminology, however, the need for a coordinated national plan with uniform provisions and terminology became increasingly apparent. To meet this need the National Poultry Improvement Plan was formulated by representative poultry leaders after 10 years of careful consideration of the problem. It was placed into operation July 1, 1935.

HOW PLAN ASSISTS THE POULTRY INDUSTRY

The National Poultry Improvement Plan has been developed to assist the poultry industry in placing itself upon a more sound and efficient basis. This is being accomplished through (1) the development of more effective State programs for improving the production and breeding qualities of poultry and reducing mortality from pullorum disease; (2) the authoritative identification of breeding stock, hatching eggs, and chicks with respect to quality, describing them in uniform terms; and (3) the establishment of an effective cooperative program through which the best results from scientific research can

be applied immediately to the improvement of poultry and poultry products.

ADMINISTRATION OF THE PLAN

The plan is administered cooperatively by an official State agency, in each of the cooperating States, and the Bureau of Animal Industry of the United States Department of Agriculture. The official State agency recognized by the Bureau of Animal Industry is usually the agency that was administering the State poultry-improvement program prior to the adoption of the national plan and it may be the State department of agriculture, State college of agriculture, State poultry improvement board or association, or similar organization recognized by the State government. Authority for an official State agency to administer the plan within the State is a memorandum of agreement between it and the Federal Bureau of Animal Industry. This State agency directs, supervises, and is responsible for flock selection, testing for pullorum disease, and other local administrative work involved in the operation of the plan. The Bureau of Animal Industry is responsible for coordinating the program among the States in which the plan is in operation.

WHO MAY PARTICIPATE AND HOW

Any poultry breeder, hatcheryman, or flock owner in a State having an official State agency for administering the plan may cooperate in the program by signing an agreement with this agency and complying with the provisions of the plan. Following proper certification of the quality of his flocks and hatchery products by the State agency, such flock owner, hatcheryman, or poultry breeder may then use the emblem (shown on cover page), designs, and terminology of the National Poultry Improvement Plan in advertising his flock or hatchery products. The plan is Nation-wide in scope. The adoption of the plan on the part of States or individual industry members is entirely voluntary, but participants must meet its minimum requirements. Participation in the plan has grown steadily since its inauguration, and breeders and hatcherymen in 44 States are operating under official supervision, in compliance with provisions of the various breeding and pullorum-control phases of the plan.

SELECTION, TESTING, AND INSPECTION

Only standard breeds and varieties of chickens are eligible to qualify as breeding stock. All birds intended for breeders are selected annually by qualified flock-selecting agents or official State inspectors (fig. 1) and identified with sealed and numbered leg bands obtained through the official State agency. The flock-selecting agents are especially trained by the State college of agriculture or other properly constituted agency and authorized by the official State agency. Inspections of breeding flocks and hatcheries are made by State inspectors employed by the official State agencies.

The testing of birds for pullorum disease is done by a livestock sanitary official, a representative of the State college of agriculture, or



FIGURE 1.—Authorized agents selecting and blood-testing a National Poultry Improvement Plan breeding flock.

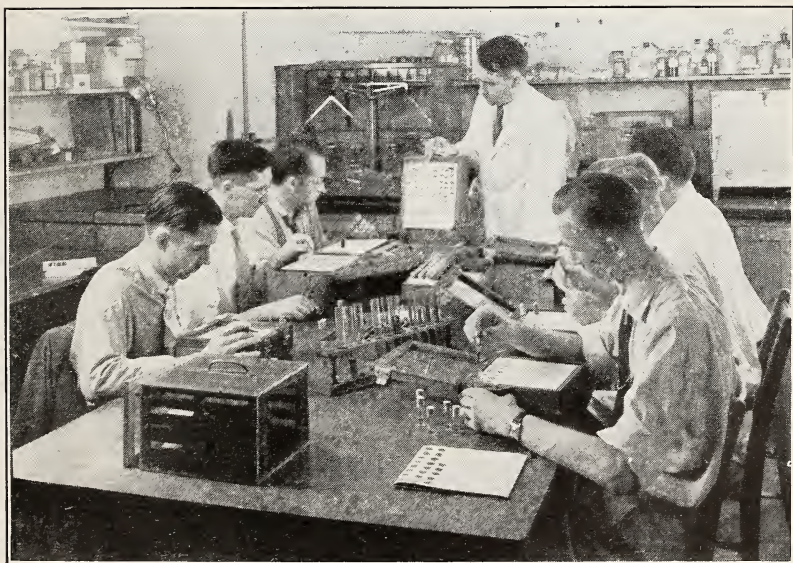


FIGURE 2.—Training school for pullorum-testing agents.

a similarly authorized State employee, or, in the case of the U. S. Pullorum-Tested class, by a pullorum-testing agent. Such agents are required to take a course of training (fig. 2) prescribed by the live-

stock sanitary authorities or officials of the State college of agriculture and to be authorized by the official State agency to do pullorum-testing work.

The plan specifies that the premises and equipment of participating flock owners and hatcherymen be kept in sanitary condition.

Accurate records are kept by participating breeders and hatcherymen of the name and address of each flock owner and number of eggs received from him, the name and address of each purchaser, and the number, breed, variety, and date of shipment of all chicks sold. These records are open for official inspection at all times.

LABELS, DESIGNS, AND TERMINOLOGY

A combination of terms with the prefix "U. S." and labels and designs indicating the exact breeding stages and pullorum-control classes are provided for the participating breeders and hatcherymen to identify their breeding stock and hatchery products. The various designs are in specified colors for attractiveness and ease of identification. Use of the official terminology of the plan and the labels and designs is limited to those who are participating and complying with its provisions.

The plan requires all proposed advertising to be submitted to the official State agency and to have its approval before publication.

BREEDING STAGES AND PULLORUM-CONTROL CLASSES

The plan includes five progressive breeding stages, each having successively higher requirements in the following order: (1) U. S. Approved, (2) U. S. Verified, (3) U. S. Certified, (4) U. S. Record of Performance, and (5) U. S. Register of Merit.

Three progressive pullorum-control classes are provided, these likewise having successively higher requirements as follows: (1) U. S. Pullorum-Tested, (2) U. S. Pullorum-Passed, and (3) U. S. Pullorum-Clean.

Minimum requirements are established for each breeding stage and each pullorum-control class, but any breeder may set higher standards for his own operations if he desires. The plan does not limit a breeder's efforts but, on the contrary, encourages and stimulates the most advanced breeding and disease-control methods.

The breeding and the pullorum-control work may be carried on independently of each other if the official State agency approves. However, it is recommended that both phases of the program be followed simultaneously.

THE BREEDING STAGES

U. S. APPROVED BREEDING STAGE

In the U. S. Approved breeding stage both males and females are selected for constitutional vigor and standard-bred and production qualities by either a State inspector or a flock-selecting agent. If selected by a flock-selecting agent, at least one-third of the flocks supplying eggs to a hatchery are inspected and approved by a State

inspector in order to assure high quality breeding flocks. Hatching eggs are carefully selected for size, shape, color, and shell texture. No eggs weighing less than $1\frac{1}{2}$ ounces each (23 ounces per dozen) are used to produce U. S. Approved chicks. Each hatchery is inspected at least once during each hatching season. Figure 3 shows the design used for this breeding stage.

The general provisions regarding constitutional vigor and standard-bred and production qualities of males and females in breeding flocks, and shape, color, and shell texture of hatching eggs, as indicated under the U. S. Approved breeding stage, apply in each of the subsequent breeding stages.

U. S. VERIFIED BREEDING STAGE

The males used in U. S. Verified breeding flocks are from U. S.



FIGURE 4.—Design used to identify U. S. Verified flocks, eggs, chicks, and hatcheries.

Record of Performance flock matings in which the females have a trap-nest record of at least 200 eggs that weigh an average of at least 24 ounces per dozen. The males and females are selected by State inspectors or qualified flock-selecting agents. All flocks are inspected and verified by a State inspector once or more often during the hatching season. No hatching eggs weighing less than $1\frac{1}{2}$ ounces each are used to produce U. S. Verified chicks. Each hatchery is inspected by a State inspector two or more times during the hatching season. Figure 4 shows the design used for this breeding stage.

U. S. CERTIFIED BREEDING STAGE

All the males used in U. S. Certified breeding flocks are selected by State inspectors and are from U. S. Record of Performance individual male matings in which the females have laid 200 eggs or more under official trap-nest supervision. These males are free from standard disqualifications. Sires of the males are from dams with official trap-nest records of 200 eggs or more. The females are selected by either a State inspector or an authorized flock-selecting agent. All flocks are inspected and certified by a State inspector one or more times during the hatching season. No hatching eggs weighing less than $1\frac{1}{2}$ ounces each and averaging less than 24 ounces per dozen are used to produce U. S. Certified chicks. Each hatchery is inspected by an official State inspector two or more times during the hatching season. Figure 5 shows the design used for this breeding stage.

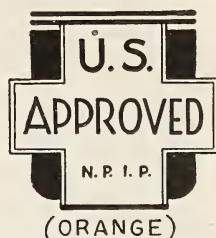


FIGURE 3.—Design used to identify U. S. Approved flocks, eggs, chicks, and hatcheries.



FIGURE 5.—Design used to identify U. S. Certified flocks, eggs, chicks, and hatcheries.

U. S. RECORD OF PERFORMANCE BREEDING STAGE

In the U. S. Record of Performance stage the females are trap-nested and to qualify must lay 200 or more eggs in 1 year. These eggs must average at least 24 ounces to the dozen. Males are selected by an official State inspector, and must come from hens which lay 200 or more eggs in a year. Both males and females must attain a standard weight for the breed and variety and be free from standard disqualifications. Eggs for sale or hatching must weigh at least 2 ounces each and 25 ounces or more per dozen. All flocks are inspected by a State inspector at least seven times during the year. All chicks are individually pedigreed and wing-banded at hatching time. Detailed records are kept on trap-nesting, hatching, and wing-banding operations. Figure 6 shows the design used for this breeding stage.



FIGURE 6.—Design used to identify U. S. Record of Performance flocks, eggs, chicks, and breeding stock.

U. S. REGISTER OF MERIT BREEDING STAGE

In this most advanced breeding stage recognition is given only to U. S. R. O. P. males and U. S. R. O. P. females on the basis of the performance of their daughters. U. S. R. O. P. males may become U. S. R. O. M. males when a minimum of 20 and at least one-third of their daughters entered under U. S. R. O. P. supervision qualify as U. S. R. O. P. females. U. S. R. O. P. females may become U. S. R. O. M. females when a minimum of four and at least one-third of their daughters entered qualify as U. S. R. O. P. females. Figure 7 shows the design used for this breeding stage.



FIGURE 7.—Design used to identify U. S. Register of Merit flocks, eggs, chicks, and breeding stock.

PULLORUM CONTROL

Pullorum disease (bacillary white diarrhea) is widespread, existing in every section of the United States where appreciable numbers of poultry are kept. It causes heavy financial losses, resulting from the deaths of baby chicks, diminished egg production in hens and pullets, reduced hatchability of eggs, and occasionally the death of hens due to generalized pullorum infection. Fortunately this disease may be controlled adequately by making blood tests of the breeding stock and removing all individuals that react. It is likewise important to employ sanitary methods in incubation and in grading and brooding chicks in hatcheries to prevent spread of this infection.

Any one of the following methods may be used in officially testing chickens for pullorum disease: (1) The tube agglutination test, (2) the stained antigen, rapid, whole-blood test, and (3) the rapid serum test.

PULLORUM-CONTROL CLASSES

U. S. PULLORUM-TESTED CLASS

All chickens 4 months of age or older to be retained as breeders are tested by a State inspector or pullorum-testing agent and the reactors removed from the premises on completion of the test. Flocks containing more than 10 percent of reactors are retested until there are fewer than 10 percent of the birds which react positively to the test. Testing work is done within 12 months immediately preceding the date of sale of hatching eggs or chicks. All chickens introduced into breeding flocks at any time must be tested and be negative to the test. Figure 8 shows the design used for this pullorum-control class.

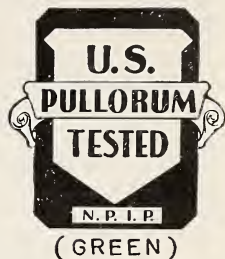


FIGURE 8.—Design used to identify products from U. S. Pullorum-Tested flocks.

U. S. PULLORUM-PASSED CLASS

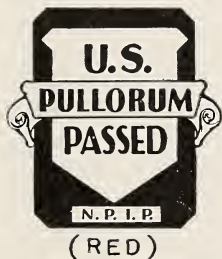


FIGURE 9.—Design used to identify products from U. S. Pullorum-Passed flocks.

All chickens over 4 months of age in breeding flocks and on the same premises are tested by a livestock sanitary official, a representative of the State college of agriculture, or similarly authorized State employee. U. S. Pullorum-Passed flocks do not contain any reactors on the last test made within the testing year immediately preceding date of sale of hatching eggs, chicks, or breeding stock. Birds introduced into the flocks are from U. S. Pullorum-Passed or U. S. Pullorum-Clean flocks. Figure 9 shows the design used for this pullorum-control class.

U. S. PULLORUM-CLEAN CLASS

All chickens over 4 months of age to be retained as breeders in U. S. Pullorum-Clean flocks are tested annually by a livestock sanitary official, a representative of the State college of agriculture, or similarly authorized State employee. Flocks to be so designated must not contain reactors in either of two consecutive tests not less than 6 months apart, the last test being made within the testing year immediately preceding the date of sale of hatching eggs, chicks, or breeding stock. Birds introduced into the flocks must be from only U. S. Pullorum-Clean flocks. Figure 10 shows the design used for this pullorum-control class.



FIGURE 10.—Design used to identify products from U. S. Pullorum-Clean flocks.

WHO WILL BENEFIT BY THE PLAN

The National Poultry Improvement Plan is based upon tried breeding and pullorum-control practices that have over a period of years demonstrated their value in improving the breeding and production qualities of poultry and reducing losses from pullorum disease. Therefore its extensive and efficient operation over a sufficient period of years should greatly benefit the entire industry and the consumers of poultry products.

The principal benefits to be derived by buyers of chicks and breeding stock are: (1) A consistent improvement in stock leading to a more efficient production of better quality poultry products; (2) decreased mortality in chick and adult flocks, resulting from pullorum-disease control; and (3) obtaining true facts concerning the quality of stock available in order that they may buy with confidence and with greater assurance of securing the quality of stock which they desire.

Benefits which flock owners who produce hatching eggs may expect are: (1) Improvement of their own breeding flocks through selection, pullorum control, and suggestions as to the best management practices; and (2) securing better foundation stock for the improvement of their flocks.

Hatcherymen receive aid in numerous ways as follows: (1) Obtaining official certification of the quality of products which they produce; (2) through identifying good foundation male stock for their hatching-egg flocks; (3) getting better cooperation from their hatching-egg producers; (4) educating the poultry public regarding the quality and soundness of their production program; and (5) in keeping simple and essential records useful in the efficient and profitable operation of their business.

Poultry breeders doing trap-nesting and pedigreeing are aided (1) in developing sounder breeding programs; (2) in obtaining the most satisfactory type of forms for keeping records of all breeding operations and results; and (3) in the certification of their stock on the basis of its merits.

Marketing agencies and the consuming public also should benefit materially from the greater uniformity and superior quality of eggs and poultry meat resulting from operation of the breeder and hatchery industry under the national plan.

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